

REMARKS

After entry of this amendment, claims 1-5, 7-15, 17-25, and 27-55 remain pending. Applicants note that, while the status of claims 31-41 and 43-55 as listed above is withdrawn to be consistent with the present Office Action, the restriction is improper (for reasons discussed below) and thus Applicants do not agree that the above claims are withdrawn. Rather, the above claims should be reinstated because the restriction is improper. In the present Office Action, a restriction requirement was lodged and constructive election of the original claims was made. Claims 1-5, 7-15, 17-25, 27-30, and 42 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 11, 21, and 42 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kogge, U.S. Patent No. 5,475,856 ("Kogge"). Applicants respectfully traverse the restriction requirement and the rejections, and request reconsideration. Claims 2-5, 7-10, 12-15, 17-20, 22-25, and 27-30 were indicated as allowable if the Section 112 Rejection were overcome and if rewritten in independent form.

Request to Rescind Finality of the Rejection

Applicants respectfully request that the finality of the present Office Action be rescinded, that the present amendment be entered, and that a new action on the merits be issued in the present application. Applicants' amendment in response to the previous Office Action in the present application merely rewrote claim 1 to include the features of claim 6, which was indicated as allowable over Kogge in that previous Office Action. (Applicants' amendment also rewrote claim 11 to include the features of 16 and claim 21 to include the features of claim 26, both of which were indicated in the previous Office Action as allowable over Kogge). Applicants did change the label "fourth" from claim 6 to "third", but this is merely a label (as highlighted in the discussion below) and carries no other implications in the claim. Since a previously allowed claim is being rejected using the same art over which the claim was considered allowable, the rejection was not necessitated by Applicants' amendment and the Office Action cannot be made final.

Still further, the 35 U.S.C. § 112, second paragraph rejections lodged in the present Office Action reject the claim language previously included in claim 6. Again,

this is a new grounds of rejection not necessitated by Applicants' amendment, and thus the present Office Action cannot be made final.

Additionally, as addressed below, the restriction requirement made in the present Office Action is improper. Thus, Applicants are entitled to an action on the merits of claims 31-41 and 43-55. Since the present Office Action does not included an action on the merits of claims 31-41 and 43-55, the present Office Action cannot be made final.

Section 102 Rejection

Applicants respectfully submit that each of claims 1, 11, 21, and 42 recite combinations of features not taught or suggested in the cited art. For example, claim 1 recites a combination of features including: "the execution core is configured to store a first address in the third register responsive to the first instruction, wherein the first address is an address of a second instruction following the first instruction".

The present Office Action alleges that the first and second registers in claim 1 are the IR 105 of processor 1 and the IR 105 of any of the other processors 2-N, respectively, when they store a branch instruction which includes target address information (see Office Action, page 5, lines 4-13). Additionally, the present Office Action alleges that the processor selects the first target address as the next program counter address in the SIMD mode and the second target address as the next program counter address in the MIMD mode responsive to a "first instruction" (see present Office Action, page 5, line 14-page 6, line 7). Accordingly, since the processors execute the branch instruction in their respective IR 105 to branch to the target address as the next program counter address, the Office Action is asserting that the first instruction is a branch instruction in Kogge.

The Office Action then goes on to allege that the third register in claim 1 is taught by the PC 103 and to allege that "the execution core is configured to store a first address in the third register responsive to the first instruction, wherein the first address is an address of a second instruction following the first instruction" is taught by the next

instruction address being saved in the PC 103 after the first instruction is executed. However, since the first instruction is alleged to be a branch instruction and the present Office Action alleges that the first or second target address is selected as the next program counter address in response to the branch instruction, the PC 103 would be storing the first or second target address after executing the branch instruction (not the address of the next instruction after the branch instruction). Accordingly, the PC 103 cannot teach or suggest the third register as recited in claim 1, wherein "the execution core is configured to store a first address in the third register responsive to the first instruction, wherein the first address is an address of a second instruction following the first instruction".

Furthermore, in the SIMD mode, Kogge teaches that the PC is not automatically incremented when an instruction is executed unless that instruction is a two word immediate instruction such as load immediate (Kogge, col. 7, lines 7-11). Thus, Kogge teaches that at least in the SIMD mode, the PC 103 does not store the address of the next instruction after an instruction is executed. In particular, branch instructions are not two word immediate instructions in Kogge and thus there is no update of the PC 103 to the next instruction in SIMD mode, contrary to the assertion in the Office Action.

For at least the above-stated reasons, Applicants submit that claim 1 is patentable over the cited art. Claim 42, dependent from claim 1, is also patentable over the cited art for at least the above stated reasons as well. Claim 11 recites a combination of features including: "the processor is configured to store a first address in the third storage location responsive to the first instruction, wherein the first address is an address of a second instruction following the first instruction". Claim 21 recites a combination of features including: "storing a first address in a third register responsive to executing the first instruction, wherein the first address is an address of a second instruction following the first instruction". The same teachings of Kogge highlighted above with regard to claim 1 are alleged to teach the above highlighted features of claims 11 and 21 as well. Applicants respectfully submit that Kogge does not teach or suggest the above

highlighted features of claims 11 and 21, either. Accordingly, claims 11 and 21 are patentable over the cited art for at least the above stated reasons.

Section 112 Rejection

The present Office Action rejected claims 1-5, 7-15, 17-25, 27-30, and 42 under 35 U.S.C. § 112, second paragraph as being indefinite for the use of the phrase "a first address of a second instruction following the first instruction in the third register". Specifically, the present Office Action alleges that: (a) the first address is not defined and that the "first address of a second instruction" implies that the second instruction has at least a second address; and (b) it is not clear whether the "first address", the "second instruction", or the "first instruction" is in the third register. Applicants respectfully disagree with the rejection.

With regard to (a), Applicants respectfully submit that there is no ambiguity and the claim is clear. The first address is merely an address of the second instruction. There is nothing unclear about reciting a first address, and associating that address with the second instruction.

Furthermore, Applicants strongly disagree with the allegation that the "first address of the second instruction" implies that the second instruction has at least a second address. The use of first, second, third, etc. in the claims generally does not carry any significance other than to label different instances of the same underlying term. Such labels permit unambiguous reference to the terms later in the claims, while also permitting conciseness in the claims. For example, in claim 1, the first target address, the second target address, and the first address are all different instances of an address which are each further defined with regard to other features in claim 1. Subsequently, the first target address, the second target address, and the first address may be referred to unambiguously (including in dependent claims). Accordingly, the term "first address" merely permits that instance of "address" to be unambiguously distinguished from the "first target address" and the "second target address" used in claim 1.

Accordingly, first, second, third, etc. is merely a label and does not imply order, the existence of other instances, etc. The use of "first" does not imply that there is a "second". Similarly, the use of "fourth" does not imply that there is a "third" (or a "first" or a "second"). Applicants respectfully submit that the use of first, second, etc. is more concise than labeling instances as "one", "another", "yet another", "still another", etc. (or other labeling schemes).

With regard to (b), Applicants respectfully submit that the following phrase clearly recites that the first address is stored in the third register: "the execution core is configured to store a first address of a second instruction following the first instruction in the third register". However, merely to even further enhance the clarity, Applicants have amended claim 1 to recite the equivalent "the execution core is configured to store a first address in the third register responsive to the first instruction, wherein the first address is an address of a second instruction following the first instruction". Claims 11 and 21 have been amended in a similar fashion. Applicants respectfully submit that the pending claims meet the requirements of 35 U.S.C. § 112.

Restriction Requirement

The present Office Action alleges that the pending claims are directed to three species. Species I includes claims 1-5, 7-15, 17-25, 27-30, and 42. Species II includes claims 31-41. Species III includes claims 42-53 (presumably 43-55). However, the present Office Action fails to show that Species I, II, and III have mutually exclusive characteristics. A proper restriction to a species requires that the species be mutually exclusive. See, e.g., MPEP 806.04(I): "Claims to be restricted to different species must be mutually exclusive". The general test as to when claims are restricted, respectively, to different species is that fact that one claim recites limitations which under the disclosure are found in a first species but not in a second, while a second claim recites limitations disclosed only for the second species and not the first. This is frequently expressed by saying that claims to be restricted to different species must recite the mutually exclusive characteristics of such species." (emphasis added). Note that "mutually exclusive characteristics" is a requirement of the species *as described in the disclosure*. "Mutually

exclusive characteristics" does not mean that one claim recites a limitation not expressly recited in another claim.

The present Office Action has made no attempt to show that the claims in Species I, II, and III are mutually exclusive. Accordingly, the restriction requirement is improper for at least this reason. Furthermore, Applicants respectfully submit that Species I, II, and III are not mutually exclusive and thus restriction is improper. Applicants respectfully request withdrawal of the restriction and an action on the merits of claims 31-41 and 43-55.

CONCLUSION

Applicants submit that the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5500-66000/TJM.

Also enclosed herewith are the following items:

- ☐ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Request for Approval of Drawing Changes
- ☐ Notice of Change of Address
- ☐ Fee Authorization Form authorizing a deposit account debit in the amount of \$
for fees ().
- ☐ Other:

Respectfully submitted,



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Date: 10/29/04